Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

ies ("Some Principles controlling the Deposition of Ores," *Trans. Am. Inst. Min. Engrs.*), in which he emphasized the relationship of ore concentration to the movement of ordinary ground waters, though recognizing other agencies as effective. While more recent studies have modified his conclusions in some particulars, his contribution to the subject remains to-day as probably the best known presentation of this point of view.

In connection with the studies above mentioned, Van Hise found it necessary to consider the problem of metamorphism of rocks, and out of this came his great monograph on metamorphism, in which the subject was for the first time presented systematically and intelligibly to the general geologist. His broad outline of metamorphic zones, conditions and processes has been the basis for much of the development in metamorphic geology which has proceeded since that time.

In the fields of pre-Cambrian correlation, genesis of ores, structural geology and metamorphic geology, Van Hise's contributions have been in each case distinctive in their systematic presentation and perspective. Even where treating previously known subject matter, his vigorous and comprehensive style brought the subject home in such perspective that much of the subsequent work along these lines has been strongly influenced by his work. He drew his pictures with bold, incisive lines, which challenged attention. Some of the salient features of his investigations have been the classification of deformative processes on the basis of zones of rock fracture and rock flowage, the classification of metamorphic processes on the basis of zones of katamorphism and anamorphism, and the emphasis on the normal flowage of underground waters in connection with the concentration of ores. Later studies in all these subjects have required certain modifications of the general principles laid down by Van Hise, but in their broad outlines they still figure largely in the investigations of these fields of geology, and, even where not fully accepted, their influence is felt in the impetus they have given to advancement of knowledge in these fields.

THE COAL SITUATION IN THE UNITED STATES

At the present time, when the fuel situation forces itself upon the attention of every one, any discussion of the coal problem that goes into the causes of the present unsatisfactory state of affairs should receive a careful hearing. Such a discussion is to be found in a bulletin by Chester G. Gilbert, entitled, "Coal Products: An Object Lesson in Resource Administration," just published by the United States National Museum and constituting the third paper of the series, "The Mineral Industries of the United States," in course of issue by the Division of Mineral Technology of this institution.

The author points out the magnitude of the coal resources of the United States and the dependency of national welfare upon their proper development. Yet with more coal than is found in any other country, or indeed on any other continent, this country has long been dependent upon foreign sources for such essential products made from coal as dyestuffs, fixed nitrogen, and many important drugs; and is to-day, with the first pinch of war stress, uncertain whether the fuel needs of the American home can be met during the coming month. The American public has never faced these shortages as phases of a single problem, but has first become alarmed at the dye shortage, then over the nitrogen dearth, and now shiver in anticipation of a meagre fuel supply.

To explain the present coal shortage by transportation congestion or labor difficulties is to offer a superficial cause. These dilemmas of course are the concrete means through which the trouble makes itself felt, but back of them stretches a far-reaching failure to work out a proper development for America's greatest resource. The trouble is not that insufficient coal is mined and transported, but that the present output is inadequately used. Our coal could be made to go a third further in meeting the nation's needs.

Progress in coal utilization depends fundamentally upon the production of more coke. At present the situation is limited by the needs of the iron industry. The quantity and type of coke thus far produced has been determined by its metallurgical use. Sporadic attempts to apply metallurgical coke to household purposes have met with failure and placed coke in an unfavorable light. Coke must be made of such kind as to be suitable for domestic use. This can be done; and the accomplishment is an urgent necessity. Domestic coke, in reality, will be artificial anthracite.

There is room in our industrial system for a greatly changed utilization of coal; in short, for "coal" to be used in the form of anthracite, artificial anthracite (domestic coke and steam-engine coke), metallurgical coke, gas for illuminating and power purposes, benzol for automobile engines, and at the same time made to yield a sufficiency of nitrogen, dyestuffs, explosives and other coal-product chemicals. There is present need for all these products. The problem is to make the necessary readjustments, such as may be done through the development of domestic coke, the application of coal-gas to power-plants, the adaptation of benzol to automobile engines, and so on. When this is accomplished, the fuel efficiency of our coal supply will be 25 per cent. greater, transportation difficulties for domestic fuel will be lessened, and in addition the country will be cultivating a wide range of industries, giving employment to labor and using the part now wasted of our most important single resource. These by-product industries growing out of proper coal development will serve to render the nation industrially independent in a great many essentials in agriculture, pharmacy, photography, textiles, disinfectants, explosives, refrigeration, painting, paving, water-proofing, wood preservation, and in an ever-widening circle of requirements.

Such an attainment will require a long process of organized adjusting. It can not be legislated into existence. It is a matter wherein the government can take the lead by shaping a suitable economic policy. It is particularly a matter wherein enlightened public opinion can contribute by appreciating the situation and directing action toward proper industrial coordination and growth.

The solution of the whole coal problem, in short, does not consist in cutting down industrial activities to meet present coal output, nor in circumscribing the scale of economic life to fit present misdirection of coal resources, but lies in working toward an industrial situation that will both permit and demand a widespread treatment of bituminous coal so as to yield on the one hand a smokeless fuel, an artificial anthracite so to speak, suitable alike for the home and the factory; and on the other a host of by-products essential to the industries of the nation.

SCIENTIFIC ITEMS

WE record with regret the death of Dr. Franklin P. Mall, professor